

**REMARKS**

In the non-final Office Action, the Examiner objects to the Abstract as being too long; rejects claims 3, 5, 7, 9, and 11 under 35 U.S.C. § 112, second paragraph, as indefinite; rejects claims 1, 3, and 13 under 35 U.S.C. § 102(e) as anticipated by SUBBIAH et al. (U.S. Patent No. 6,538,992); allows claims 12 and 14-26; and objects to claims 4-11 as containing allowable subject matter. Applicant respectfully traverses the rejections under 35 U.S.C. §§ 112 and 102.

By the present amendment, Applicant amends the Abstract to improve form, cancels claims 27-76 without prejudice or disclaimer, amends claims 1, 3, 12-15, and 18-20, and adds new claims 77-86. No new matter has been added by way of the present amendment. Claims 1, 3-26 and 77-86 are pending.

Applicant notes with appreciation that claims 12 and 14-26 are allowable over the art of record and that claims 4-11 contain allowable subject matter.

In the Office Action, the Examiner objects to the Abstract due to its length (Office Action, pg. 2). Applicant amends the Abstract to satisfy the length requirements of M.P.E.P. § 608.01(b).

Accordingly, Applicant requests that the objection to the Abstract be reconsidered and withdrawn.

Claims 3, 5, 7, 9, and 11 stand rejected under 35 U.S.C. § 112, second paragraph, as allegedly indefinite. In particular, the Examiner alleges with respect to claim 3 that "it is unclear what is meant by 'but included in a start cell of the packet'" (Office Action, pg. 2). Applicant has amended claim 3 to address the Examiner's concerns.

For at least the foregoing reasons, Applicant respectfully requests that the rejection of claims 3, 5, 7, 9, and 11 under 35 U.S.C. § 112, second paragraph, be reconsidered and withdrawn.

Claims 1, 3, and 13 stand rejected under 35 U.S.C. § 102(e) as allegedly anticipated by SUBBIAH et al. Applicant respectfully traverses this rejection.

A proper rejection under 35 U.S.C. § 102 requires that a single reference teach every aspect of the claimed invention either explicitly or impliedly. Any feature not directly taught must be inherently present. See M.P.E.P. § 2131. Applicant submits that SUBBIAH et al. does not disclose or suggest the combination of features recited in Applicant's claims 1, 3, and 13.

Independent claim 1 is directed to an ATM node apparatus which has a VC set between at least two adjacent ATM node apparatuses and transfers a packet over the VC after dividing the packet into cells. The ATM node apparatus includes a route table, a quality description table, a plurality of output queues, and an output control section for performing read control on a packet from each output queue so as to achieve a quality set for each output queue. The output destination of an incoming packet is determined by searching the route table by using packet header information. A quality class of the packet is determined by searching the quality description table. The packet is stored in an output queue determined by the determined output destination and quality class, and the packet is read out from the output queue in accordance with the quality set for the output queue. SUBBIAH et al. does not disclose or suggest this combination of features.

For example, SUBBIAH et al. does not disclose or suggest that a packet is stored in an output queue determined by the determined output destination and quality class. The Examiner appears to rely on col. 7, lines 1-60, of SUBBIAH et al. for allegedly disclosing this feature (Office Action, pg. 3). Applicant disagrees.

At col. 7, lines 1-60, SUBBIAH et al. discloses that the quality of service (QoS) requirements of a packet are obtained from an AAL2 Negotiation Procedure (ANP) memory table 106 and based on the packet's QoS information, the packet is stored in an appropriate queue that closely matches the QoS. SUBBIAH et al. specifically discloses that packets are placed in queues based on QoS alone (see, for example, col. 7, lines 46-48). SUBBIAH et al. does not disclose or suggest that the particular queue in which the packet is stored is identified based on a determined output destination and quality class, as required by claim 1.

Applicant notes that the Examiner alleges that "[i]t is inherent to include a route table to perform packet identification" (Office Action, pg. 3). Applicant respectfully disagrees.

Applicant's claim 1 does not recite using a route table to perform packet identification. Therefore, the Examiner's allegation that it would be inherent to include a route table for performing packet identification into the SUBBIAH et al. is not relevant to the features recited in Applicant's claim 1. Applicant respectfully requests that the Examiner explain the inherency allegation and its relevance to Applicant's claim 1.

Since SUBBIAH et al. does not disclose every feature of claim 1, a rejection of claim 1 under 35 U.S.C. § 102 based on SUBBIAH et al. is improper.

For at least the foregoing reasons, Applicant submits that claim 1 is not anticipated by SUBBIAH et al.

Independent claim 3 is directed to an ATM node apparatus which has a VC set between ATM node apparatuses and is configured to transfer a packet over the VC after dividing the packet into cells. The ATM node apparatus includes a route table and a quality description table. An output destination of an incoming packet is determined by searching the route table by using packet header information. A quality class of the packet is determined by searching the quality description table. The packet is sent out through a VC determined by the determined output destination and quality class. A plurality of VCs with different qualities is set for the same output destination. SUBBIAH et al. does not disclose or suggest this combination of features.

For example, SUBBIAH et al. does not disclose or suggest a plurality of VCs with different qualities being set for the same output destination. The Examiner does not address this feature in the Office Action. Accordingly, a proper rejection for denying patentability has not been established with respect to claim 3.

Nevertheless, SUBBIAH et al. does not disclose or suggest VCs. Therefore, SUBBIAH et al. cannot disclose or suggest a plurality of VCs with different qualities being set for the same output destination, as required by claim 3. If this rejection is maintained, Applicant respectfully requests that the Examiner specifically address this feature.

For at least the foregoing reasons, Applicant submits that claim 3 is not anticipated by SUBBIAH et al.

Independent claim 13 is directed to a node apparatus which has a plurality of VCs with different qualities set between the node apparatus and another adjacent node apparatus and transfers a packet over the VC. The node apparatus includes a plurality of output queues for which predetermined qualities are respectively set; an output table in which in correspondence with a destination address of a packet and a predetermined type of information in a packet header, an output queue in which a packet having the destination address and the predetermined information are to be stored and an output VC to which the packet in said output queue is to be output are defined; a header processing section for determining an output queue in which the packet is stored and an output VC by searching the output table by using the destination address and the predetermined information in a header of an incoming packet; and an output control section for reading out a packet from each of the output queues so as to achieve a quality set for each of the output queues, and outputting the packet to the determined output VC. SUBBIAH et al. does not disclose or suggest this combination of features.

For example, SUBBIAH et al. does not disclose or suggest a header processing section for determining an output queue in which the packet is stored and an output VC by searching the output table by using the destination address and the predetermined information in a header of an incoming packet. As set forth above with respect to claim 3, SUBBIAH et al. does not disclose VCs. Therefore, SUBBIAH et al. cannot disclose or

suggest a header processing section for determining an output queue in which the packet is stored and an output VC by searching the output table by using the destination address and the predetermined information in a header of an incoming packet, as required by claim 13. If this rejection is maintained, Applicant respectfully requests that the Examiner specifically point out where SUBBIAH et al. discloses this feature.

For at least the foregoing reasons, Applicant submits that claim 13 is not anticipated by SUBBIAH et al.

New claims 77-86 recite features not disclosed or suggested by SUBBIAH et al. For example, independent claim 77 is directed to a method including receiving a packet as a plurality of cells; determining an output destination using a first portion of a header of the packet; determining a quality class for the packet using a second portion of the header of the packet; and storing the packet in an output queue based on the output destination and the quality class. SUBBIAH et al. does not disclose or suggest this combination of features, and, therefore, claim 77 is patentable over SUBBIAH et al.

Claims 78-82 depend from claim 77. Therefore, these claims are patentable over SUBBIAH et al. for at least the reasons given above with respect to claim 77.

Independent claim 83 is directed to a network device that includes a plurality of output queues; a route table configured to store output destinations; a quality description table configured to store quality classes; an output table configured to store output queue numbers and output VC numbers; and a processing unit. The processing unit is configured to receive a packet as a plurality of cells, identify an output destination for the packet using a first portion of a header of the packet, identify a quality class for the

packet using a second portion of the header of the packet, and use the identified output destination and the identified quality class to identify one of the plurality of output queues in which to store the packet and a VC number associated with a VC via which the packet is to be transmitted. SUBBIAH et al. does not disclose or suggest this combination of features, and, therefore, claim 83 is patentable over SUBBIAH et al.

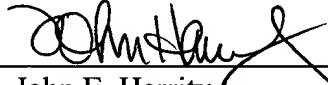
Claims 84-86 depend from claim 83. Therefore, these claims are patentable over SUBBIAH et al. for at least the reasons given above with respect to claim 83.

In view of the foregoing amendments and remarks, Applicant respectfully requests the Examiner's reconsideration of this application, and the timely allowance of the pending claims.

To the extent necessary, a petition for an extension of time under 37 C.F.R. § 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account No. 50-1070 and please credit any excess fees to such deposit account.

Respectfully submitted,

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REPLACEMENT SHEET FOR ABSTRACT

~~To satisfy a quality required for each traffic and perform switching for a packet segmented into cells without packet reassembly, there is provided a~~ A ~~node apparatus including~~ includes a header processing section (2) for determining an output destination of an incoming packet and a quality class from the header information of the packet, a route table (3), and a quality description table (4), and storing the packet in an output queue (6) determined by the determined output destination and quality class, an output control section (7) for reading out a packet from the output queue in accordance with the quality set for each output queue (6) and sending out the read packet through a VC determined by the determined output destination and quality class, ~~and a quality description table (4) which has at least a virtual dedicated number field, a destination address/mask length field, a source address/mask length field, a fourth layer protocol destination port number field, and a destination port number field and in which each field is made blank when any value can be set. In the node apparatus, a packet segmented into cells and arriving from each input VC is temporarily stored in a packet queue (26) corresponding to each input VC. When the final cell of the packet arrives, 1 packet cells are moved altogether to an output queue (27) corresponding to the destination IP address contained in the start cell and output to a corresponding output VC by an output section (28).~~